

STATUS AND DISTRIBUTION OF SNOW LEOPARD IN KIRGIZIA (U.S.S.R.)

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The International Snow Leopard Trust gratefully acknowledges the return of the following questionnaire by the authors for use at the Fifth International Snow Leopard Symposium':

1. What region does your report cover? Answer: Tien Shan in Kirgizia.

2. What sources of information are available to you concerning the relative abundance of the snow leopard in the original habitat in your region? Answer: Field observations, questionnaires for gathering information from shepherds, hunters, and other people who work in the mountains; questionnaires and other information collected from tourists and alpine groups; skins in the fur trade; and loss of domestic livestock as a result of snow leopard activity.

3. On the basis of available information would you estimate that the snow leopard population has changed in the last twenty years? Answer: Yes. it has declined.

4. Do you have estimates of current snow leopard numbers and habitat size for a specific area? What was your method of census? Answer: The study was conducted in the republic of Kirgizia, where the snow leopard territory is approximately 105.2 thousand square kilometers. Snow leopard territory is about 53% of the republic. We currently estimate the number of snow leopard in Kirgizia to be not less than 600. More optimistic estimates were made earlier, but now we must take into account interference by man in many areas and widespread distribution of sarcoptosis in the *Capra ibex sibirica* prey population. Extrapolation of the data on numbers was done via field observations in Northern and Central Tien Shan using an 18-area sample of almost 3.5 thousand square kilometers [glaciers were included

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In sample areas; they are used by snow leopards as a transit zone). The density of numbers of snow leopards varied from 0.6 to 4.4 per 100 square kilometers. In the territory of the valleys of the northern slopes of the Terskei Alatau (Altyn-Arasha, Barkskaun. Koilyu), with area of the inhabited zones at 300 square kilometers each, five to eight animals were registered in winter time. The maximum density observed in Central Tien Shan at the Koiluy massif (near Lake Bashkul') was five animals in a territory of 114 square kilometers. Sarcoptosis in *Capra ibex sibirica* has not been detected here.

The method used for estimating numbers was tracks of the snow leopard in the snow.

The route was laid out in places where there was likely to be snow leopard tracks: (1) in Northern Tien Shan, along river valleys which the snow leopard traverses while crossing from one slope to another (61.75% of tracks encountered, number = 175). (2) in the Central Tien Shan, along outcroppings at base of cliffs (39.8% of track sitings, number = 138); along the crests of watersheds (17.4%);

in river valleys (17.4%).

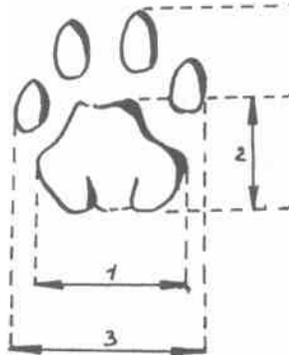


FIGURE 1. Scheme for measurement of snow leopard track.

The tracks were identified by their measurements as illustrated in Figure 1. This method is being perfected at the present time. More exact indicators for individual identification are given by measurements of paw pad pug marks. (See numbers 1 and 2 in Figure 1.) The depth of the paw immersion in the snow that is desirable is 2 to 5 centimeters. Under different conditions, the exactness diminishes. Measurements of length and width of the tracks as in numbers 3 and 4 of Figure 1 can be variable due to the mobility of the toes. That is why the paw pad should be measured.

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5. What do you consider to be the primary threats to the snow leopard in your region? Answer: (a) Shooting of snow leopard by shepherds because of attacks on livestock; (b) Subdivision of snow leopard territory into smaller areas and a general decrease in the snow leopard population density due to the activities of man; (c) Possible deaths of snow leopards from sarcoptosis; (d) Reduction in the wild prey *Capra ibex sibirica* due to hunting, the extensive development of livestock husbandry and the widespread distribution of sarcoptosis in this species.